

REMARKS

Applicants acknowledge with appreciation the courtesy extended by the Examiner in a telephone conversation with Applicant's representative, Randall A. Notzen, on June 24, 2005. During this conversation, the Examiner suggested amending the independent claims to recite that the capacitance of a capacitor formed by the contact of the partially spherical surface of the contact means in contact with the topside of the semiconductor wafer includes a first capacitance resulting from the materials in alignment with a contact area of the contact means in contact with the top surface of the semiconductor wafer and a second capacitance resulting from materials in alignment with a gap defined between the top surface of the semiconductor wafer and the surface of the contact means not in contact with said top surface surrounding said contact area. The Examiner indicated that amending the claims generally in this manner would overcome the arguments raised by the Examiner in the first paragraph of the Office Action and would advance the prosecution of the application. The Examiner also indicated that it would be necessary to file a Request for Continued Examination (RCE) in order to have the amended claims considered since it would require a further search.

In response to the Examiner's indication, independent claims 1, 7 and 13 have been amended to generally recite that the capacitance of the capacitor formed by the contact of the partially spherical surface of the contact means with the topside of the semiconductor wafer is comprised of a first capacitance resulting from materials in alignment with a contact area of the contact means in contact with the top surface of the semiconductor wafer and a second capacitance resulting from materials in alignment with a gap defined between the top surface and the contact means surrounding the contact area. Other minor amendments have also been made to independent claims 1, 7 and 13 corresponding to the foregoing amendments. Moreover, in view of the foregoing amendments to independent claims 1, 7 and 13, dependent claims 5, 11 and 17 have been cancelled. Lastly, minor editorial amendments have been made to the definition of " T_{gap} " in dependent claims 6, 12 and 18 corresponding to the foregoing amendments to independent claims 1, 7 and 13. After the foregoing amendments, claims 1-4, 6-10, 12-16 and 18 are pending in the application.

It is believed that the foregoing amendments are fully responsive to the Examiner's statements made in the first paragraph of the Office Action.

Claims 1-18 stand rejected under 35 U.S.C. § 102(e) for anticipation by U.S. Patent No. 6,583,640 to Eriguchi et al. Reconsideration and withdrawal of this rejection are respectfully requested.

The Eriguchi et al. patent does not disclose, teach or suggest all the limitations of independent claims 1, 7 and 13 as amended herein. Specifically, as discussed above, independent claims 1, 7 and 13 have been amended to generally recite that the capacitance of a capacitor defined by an at least partially spherical contact of a contact means in contact with the topside of the semiconductor wafer is comprised of a first capacitance resulting from materials in alignment with a contact area of the contact means in contact with the top surface of a semiconductor wafer and a second capacitance resulting from materials in alignment with the gap surrounding the contact area. The permittivity of the dielectric layer of the semiconductor wafer is determined as a function of the capacitance, the thickness of the dielectric layer and the thickness of the gap surrounding the contact area.

In contrast, the Eriguchi et al. patent, at column 26, line 58 discloses the formula $\epsilon = Cox \cdot t$ for determining the permittivity of a dielectric film of a semiconductor wafer as the function of the capacitance of the dielectric film (Cox) and the thickness (t) of the dielectric film. However, this formula clearly does not account for the thickness of the gap between the surface of the partially spherical conductive surface and the topside of the semiconductor wafer adjacent the contact area of the contact means in contact with the top surface of the semiconductor wafer.

Absent disclosing, teaching or suggesting an invention having all the limitations of independent claims 1, 7 and 13, the Eriguchi et al. patent cannot anticipate or render obvious these claims, or claims 2-4, 6, 8-10, 12, 14-16 and 18 dependent therefrom.

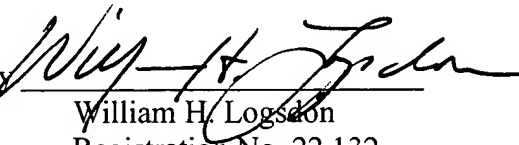
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CONCLUSION

Based on the foregoing amendments and remarks, reconsideration of the rejection and allowance of claims 1-4, 6-10, 12-16 and 18 are requested.

Respectfully submitted,

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